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THE STORY OF CLOTH

Broadcast by Miss Ruth O'Brien, Bureau of Home Economics, and Miss Velma Hailman, 4-H Club Member, Fairfax, Virginia, in the monthly National 4-H Club program National Farm and Home Hour, over the blue network of the National Broadcasting Company.

--ooOoo--

BAKER:

We're in Washington --

This part of today's National 4-H Club program is going to be a little different from the general run of programs in this monthly series. It's going to be for club members -- but not about them.

It occurred to some of us that the boys and girls in 4-H Clubs would enjoy and appreciate knowing something of the background of the things they work with -- things that most of us take for granted. For example -- thousands of 4-H Club girls are starting on clothing projects this fall. If it's their first year -- the leader will have them start on something easy -- like hemstitching a hankie -- or whatever they do to hankies. Well -- wouldn't it be sorta interesting to know something about the cloth you're working with?

VELMA:

I think it would, Mr. Baker.

BAKER:

I'm glad you think so, Velma. Friends, this is Velma Hailman, a 4-H Club member from Fairfax county, Virginia.

You're a little beyond hankie hemstitching -- in your 4-H projects, aren't you Velma?

VELMA:

Oh yes. In fact, I don't remember that I ever did do that. As I remember it, I made a slip and a dress my first year in a sewing project. That was 7 years ago. I've made lots of cotton dresses---you see, I make all my summer clothes. And I've made some rayon dresses and blouses, and I've just finished making a wool dress. This was the first time I've had courage enough to try anything of wool. Now--- I want to tackle the problem of a jacket.

BAKER:

Seems to me a jacket might be something to tackle, Velma.

Every give any thought to how those materials were made--and how it happens that we wear clothes made of wool--and cotton--or silk or rayon, as the case may be?

VELMA:

Well---not very much I guess. But I'd certainly like to learn about those things. What kind of material did they make their clothes of a long time ago--- 'way back in Bible times?

(over)

BAKER:

Now hold on a minute! Don't ask me those questions. Let's turn them over to Miss Ruth O'Brien. She's head of the textile division of the Bureau of Home Economics---and so she can tell you a lot about cloth and clothing of different kinds. Miss O'Brien---this is Velma Hailman---who just embarrassed me by starting to ask about what kind of material clothes were made of back in Bible times.

MISS O'BRIEN:

Well---I believe the first clothing mentioned in the Bible was a fig leaf. So we've made some progress since those days.---But later on---nobody knows how much later---somebody found that it was possible to weave different kinds of things together---and sooner or later, they were making cloth. You know the general idea of weaving, don't you, Velma?

VELMA:

Well, I think I do. You have threads going up and down and others going across---and the ones that go across are put over and under, over and under the others. Isn't that it?

MISS O'BRIEN:

Yes---that's the principle of weaving. The weaver calls those threads yarns. The up and down yarn make up the warp---and those that go across are called the weft or filling yarns. Nobody knows just when weaving was first discovered---or who first learned how to weave. There are records of different kinds which indicate that the Egyptian people were weaving cloth as long ago as five or six thousand years before Christ. And it may be that their first weaving was not to make cloth---but to make mats out of reeds and rushes---or something like that. Sooner or later they found that fibers of flax could be woven into cloth. It's only a guess, of course, but I believe it's a fairly safe guess that the first cloth in the world was made in Egypt---and was made from flax.

VELMA:

From flax---then that would be linen, wouldn't it?

O'BRIEN:

That's right---although it probably was very coarse and very poor linen compared with some of the very fine materials that came to be made later. Probably not long after that, the Egyptians learned to make cloth out of the wool of sheep, because they had sheep---and woollen cloth has been found that is very, very old.

VELMA:

I know a lot of old things have been found in the tombs of the ancient kings of Egypt---in the big pyramids.

O'BRIEN:

Yes---that's where much of our knowledge has been stored---in those tombs of the Pharaohs. And some of the ancient art work in the tombs shows the people weaving. So we know weaving was an important part of the life of the Egyptian people thousands of years ago.

In fact, if you study the history of weaving, you can get a very interesting review of the history of the world. The art of weaving---and it is an art---has moved from one part of the world to another with conquering rulers---battles have been fought---dangerous voyages have been made---countries have been attacked and



overcome---to get the finely woven cloths of the more civilized nations.

VELMA:

I didn't realize making cloth was that exciting.

MISS O'BRIEN:

It's one of the most fascinating series of stories you can imagine. But to go back to the first question you asked, Velma---about the kind of cloth used in Bible times---probably the early Hebrews wore linen, wool, and some cotton. Cotton seems to have come along much later---perhaps only a few centuries before the time of Christ. But it was being used by Biblical times. You recall the famous coat; that Joseph wore?

VELMA:

You mean---the coat of many colors that his brothers found after he'd been carried away to Egypt.

MISS O'BRIEN:

That's right. Well, some people think that Joseph's coat of many colors was made of cotton--But I imagine that he and his brothers must have worn some linen and some woollen clothing, because they were shepherds--and because flax was common in that part of the world.

And here's an interesting thing---some of the cloth made several thousand years ago was even finer than the cloth that is made today. So, you see, the ancient Egyptians, Hebrews, Babylonians, and others of those ancient peoples become extremely skillful in spinning and weaving.

VELMA:

You mean---even two or three thousand years ago they could make better cloth than we can buy today at our stores?

MISS O'BRIEN:

Well---judged by some standards, it really was better cloth. There are ancient linen burial cloths, for example, in which the thread was smaller and the cloth was more finely woven than is usually made on our big, intricate cloth-making machines of today. But probably such very fine linen, and the other marvelous cloth of the olden days were reserved for the emperors. It was all made by hand, because nobody had even thought of power machinery in those days. There's no way of telling how many hours and hours of tedious labor went into making every yard of such cloth.

I believe it was Nero who is supposed to have paid more than the equivalent of \$40,000 for one tapestry woven in Babylon.

VELMA:

Forty thousand dollars---for just one tapestry! Imagine that.

MISS O'BRIEN

It does seem like a lot of money, doesn't it?

The Old Testament is full of stories about the wealth and brilliance of the palaces of some of the ancient rulers---and if you'll go back and read them, you'll find that fine cloth and tapestries are mentioned time after time. Cloth was used not only for clothing---but it was an important part of the scheme of decoration.

VELMA:

I'll bet they must have used just yards and yards of silk and satin and things like that.

MISS O'BRIEN:

Yes---in many cases they did. But you know in Egypt, Palestine, Asayria--- and the other countries mentioned in the Bible---they didn't have silk materials until long after they had perfected the weaving of linen and wool.

VELMA:

Where'd the silk come from?

MISS O'BRIEN:

It came from China. For centuries, China was the only country in the world where silk was produced. No other nation had the silkworms, or the mulberry trees on which they fed. I don't suppose any secret was ever more carefully guarded than the secret of Si-ling-chi.

VELMA:

Si-ling-chi. That sounds like Chinese, all right---but what is it?

MISS O'BRIEN:

Si-ling-chi was the wife of a Chinese prince who lives probably 4500 years ago. One day in her garden she noticed a worm spinning a cocoon around itself. She picked it up and found that she could unwind the tiny thread that the worm had made. She kept studying the silkworms until she learned how to spin these tiny threads off the cocoons into stronger threads which could be woven together. And she also invented a loom for weaving. So---Si-Ling-chi is credited with being the person who gave silk to the world.

VELMA:

But from what you said a minute ago, it looks as though the Chinese didn't want to give up the silk.

MISS O'BRIEN:

The Chinese didn't want to give up the secret of how the silk was made, but they were glad for other nations to have their silk. And for centuries, China carried on a growing trade with other countries so that the fame of silks from China spread to the western part of Asia---to India, to Egypt and other lands.

There are some interesting accounts of how the secrets of producing silk were smuggled out of China. A Chinese princess was supposed to have been the first to take the secrets out of the country. She was married to a man from another land and when she went to his home she hid silk worm cocoons and seeds of mulberry trees in her head-dress. Anyone else would have been searched, but because she was a princess she could cross the border without that ceremony.

The Japanese learned the secrets of sericulture---that's the technical name for growing silkworms and producing silk---and eventually knowledge of the art spread to India, because when Alexander the Great conquered India, he found the people of that country producing silk.

But still---most of the finest silk was imported from China---and for centuries it was one of the most important items of trade between Europe and the Orient.



By the way, Velma do you know what Columbus was looking for when he discovered America---back in 1492?

VELMA:

Why---he was looking for a way to get to the Orient---to bring back spices---

MISS O'BRIEN:

Yes---to bring back spices---and silk. And even today---raw silk is still an important item in world trade. The United States has some large silk mills---but we don't produce any raw silk. It all has to be imported---most of it from Japan and Italy---and then manufactured here.

VELMA:

I guess I should have known that, but I didn't. But there's one thing we do produce a lot of in this country---and that's cotton.

MISS O'BRIEN:

Yes---we've been producing cotton in this country for a long time. Columbus discovered cotton in the Bahama Islands in 1492. I think it's generally agreed that colonists in this country started to grow cotton as a crop probably around 1619---in Virginia. It wasn't important at first---but little by little the settlers found that they would have to use home grown fibers to make their clothing, because they couldn't always get what they wanted or as much as they wanted from Europe. So they used their own cotton and wool.

VELMA:

How do you suppose they knew cotton could be used to make cloth?

MISS O'BRIEN:

Well, perhaps we'd better retrace our steps a little. Cotton had long been grown in India---and the people there learned to spin it into yarn and weave it into cloth. Somehow, cotton spread to the north---to Egypt and neighboring countries---long before the time of Christ. The Spanish began to produce cotton and make cotton goods after several hundred years---and in time there was quite a bit of cotton cloth made in Italy, and Germany---and then in France. Then cotton weaving spread to England.

The early settlers in this country came from England---and of course many of them had been weavers and spinners. So they were familiar with making cloth from cotton---and from wool---and from flax.

VELMA:

Oh. Well---I guess there isn't much use worrying about them. They seemed to get along all right.

MISS O'BRIEN:

Yes---they could do many things for themselves that we wouldn't think of doing today. Now---you live in Fairfax county, not far from Mount Vernon, don't you?

VELMA:

Yes---only about 10 miles from Mount Vernon.

MISS O'BRIEN:

Then you might be interested in knowing that Mr. and Mrs. Washington had a large number of Negro women who were trained to spin and weave---and they made thousands of yards of cloth every year---probably cotton, linen, and wool---to clothe the people on General Washington's plantation. You see, that was before the days of textile mills---but the Washingtons and others had their own little clothing factories right at home.

You know---we've borrowed many of our ideas and customs from England, and we have to give that country credit for much that we know about making cloth today. America manufactures more cotton goods than any other country in the world---and our textile industry got its start with inventions made in England---the spinning jenny, the spinning reel---and the power loom. For thousands of years all the spinning had been done by hand---and the weaving had been done on hand looms. But in a very few years---from about 1760 to 1790---many improvements come along which made it possible to spin yarn and weave cloth with machines and do it much faster and cheaper than it ever had been done before. Of course---all the things that looked like improvements 150 years ago would be pretty much out of date in a modern textile mill, but they were such big steps forward---after forty or fifty centuries of doing things by hand---that they formed part of the industrial revolution of that period.

VELMA:

I guess making cloth of different kinds is a lot more important than I thought. And it's certainly a lot older than I thought.

MISS O'BRIEN:

There are so many things that we haven't had a chance to say a word about. For example, we haven't even mentioned rayon which has a fascinating story all its own---from cotton linters or chips of wood---into lovely fabrics of almost any texture or weight; or any of the other synthetic fibers that are being used so much today. I haven't mentioned dyes---and they're just as much a part of the story of cloth as the fibers themselves. Perhaps we can continue the story later on, Velma.

VELMA:

I'd certainly like to, Miss O'Brien. I think I'll go to the library and see if I can't get a book about cloth to report on to my club. I believe I can see a lot a lot more in a piece of cloth than I did before. I'll think of the old Egyptians weaving their linen--- of Si-ling-chi learning how to make silk in China, of Nero and his 40 thousand dollar tapestry---or---well---it was all mighty interesting, anyhow.

BAKER:

I think that sums it up nicely Velma---even to a mere man---it was all mighty interesting. And our thanks to you, Miss O'Brien. Velma Hailman, a 4-H Club girl, from Fairfax county, Va., has been learning something, along with the rest of us, about the story of cloth---from Miss Ruth O'Brien, who is chief of the textile division of the Bureau of Home Economics.

Now for more music by The Homesteaders we return to Chicago.